PATENT COOPERATION TREATY



PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 8334 WO Z RSF-ALG	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)					
International application No.	International filing date (day/n	nonth/year)	Priority date (day/month/year)				
PCT/EP2003/007243	07 July 2003 (07.07						
International Patent Classification (IPC) or national classification and IPC F16H 3/66							
Applicant ZF FRIEDRICHSHAFEN AG							
 This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36. 							
2. This REPORT consists of a total of	5sheets, including	g this cover sh	neet.				
This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).							
These annexes consist of a tot	tal of sheets.						
3. This report contains indications relat	ing to the following items:						
I Basis of the report	I Basis of the report						
II Priority							
III Non-establishment o	f opinion with regard to novelty	, inventive step	and industrial applicability				
IV Lack of unity of inve	ention						
V Reasoned statement of citations and explana	under Article 35(2) with regard tions supporting such statement	to novelty, inve	entive step or industrial applicability;				
VI Certain documents ci	VI Certain documents cited						
VII Certain defects in the	VII Certain defects in the international application						
VIII Certain observations on the international application							
Date of submission of the demand	Date of	completion of	this report				
20 December 2003 (20.12	2.2003)	03 N	¶ay 2004 (03.05.2004)				
Name and mailing address of the IPEA/EP	Authori	Authorized officer					
Facsimile No.		Telephone No.					

Translation

International application No.

PCT/EP2003/007243

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	s of the r							
1. With	1. With regard to the elements of the international application:*							
	the international application as originally filed							
	the description:							
	pages	1-12 , as originally filed						
	pages	, filed with the demand						
	pages	, filed with the letter of						
	the clai							
	pages	1-22 gg originally 51-4						
l	pages	, as originally filed, as amended (together with any statement under Article 19						
	pages							
	pages	, filed with the demand , filed with the letter of						
\boxtimes	the dray							
الحا	pages							
	pages	, as originally filed						
	pages	, filed with the demand						
	•	, filed with the letter of						
¹¹		nce listing part of the description:						
	pages _	, as originally filed						
	pages	, filed with the demand						
	pages _	, filed with the letter of						
2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item. These elements were available or furnished to this Authority in the following language which is: the language of a translation furnished for the purposes of international search (under Rule 23.1(b)). the language of publication of the international application (under Rule 48.3(b)). the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3). With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing: contained in the international application in written form. filed together with the international application in computer readable form. furnished subsequently to this Authority in written form. furnished subsequently to this Authority in computer readable form.								
	micinati	tement that the subsequently furnished written sequence listing does not go beyond the disclosure in the conal application as filed has been furnished. The ement that the information recorded in computer readable form is identical to the written sequence listing has nished.						
ı. 🔲 j	The ame	ndments have resulted in the cancellation of:						
Į	th	e description, pages						
ļ	th	e claims, Nos						
Ł		e drawings, sheets/fig						
. 🗌 1	This reported	rt has been established as if (some of) the amendments had not been made, since they have been considered to go e disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**						
Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).								
* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.								

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International application No. PCT/EP 03/07243

y. 	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

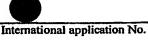
1.	Statement			
	Novelty (N)	Claims	1-22	YES
		Claims		NO
	Inventive step (IS)	Claims	1-22	YES
		Claims		NO
	Industrial applicability (IA)	Claims	1-22	YES
		Claims		NO

2. Citations and explanations

DE-A-199 49 597, which is considered to be the closest prior art, discloses an automatic vehicle transmission system of planetary construction comprising three planetary gear sets and six shift elements with seven forward speeds. in which transmission the input is effected by means of a first shaft, which is permanently connected to an element of the first planetary gear set, the output is effected by means of a second shaft, which is permanently connected to an element of the second planetary gear set and an element of the third planetary gear set, a third shaft is permanently connected to an additional element of the first planetary gear set, a fourth shaft is permanently connected to the ring gear of the second planetary gear set and to the ring gear of the third planetary gear set, a fifth shaft is permanently connected to the sun wheel of the third planetary gear set, a sixth shaft is permanently connected to the ring gear of the first planetary gear set, a seventh shaft is permanently connected to the sun wheel of the second planetary gear set, a clutch connects the fifth and sixth shafts and a clutch connects the sixth and seventh shafts.

Problem to be solved:

In the prior art, the construction costs are not favourable and the drag losses and gearing losses are too high.



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Solution of the present invention:

The above problem is solved in that the output is effected by a shaft which is permanently connected to the carrier of the second planetary gear set and to the carrier of the third planetary gear set, the third shaft can be coupled to the housing by a brake, the fourth shaft, which connects the ring gear of the second planetary gear set and the ring gear of the third planetary gear set, can be coupled to the housing by a brake, the fifth shaft can be coupled to the housing by a brake, and a clutch connects the first and fourth shafts.

Inventive step:

The combination of features in independent claim 1 is neither known from, nor suggested by, the available prior art. The proposed solution is therefore inventive.

Independent claim 1 and dependent claims 2-22 therefore comply with the requirements of PCT Article 33(2) and (3).